



Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN 1	32586 HGHWY J2 115 32590 HighWAY 115 1	Base Case	P0	No Contingency	104.99	99.46							Load growth seen from 56.5 MW in 2017 to 73.6 MW in 2025. EE of 3.5 MW modeled in 2025. Line is rated 75 MVA. Line section needs to be reconducted if EE doesn't materialize.
NCNB-T-SEN 2	31334 CLER LKE 60.0 31338 KONOCIT6 60.0 1	BUS-TIE BREAKER CB102 FAULT AT 31200 MENDOCNO 115.00	P2-4	Bus Tie Breaker	112.89	99.30							No overload with EE. Overloaded without EE.
NCNB-T-SEN 3	31246 BELLVUE 115 31248 PENNGRVE 115 1	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	123.14	111.56							Overloads worsen without EE.
NCNB-T-SEN 4	31248 PENNGRVE 115 31254 CORONA 115 1	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	128.93	116.88							Overloads worsen without EE.
NCNB-T-SEN 5	31254 CORONA 115 31255 LAKEVLE 115 1	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	122.18	110.96							Overloads worsen without EE.
NCNB-T-SEN 6	31116 GRBRVLE 60.0 31118 KEKAWAKA 60.0 1	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	103.06	91.77							No overload with EE. Overloaded without EE.
NCNB-T-SEN 7	31336 HPLND JT 60.0 31370 CLVRDLJT 60.0 1	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN 8	31370 CLVRDLJT 60.0 31374 GYSRJCT1 60.0 1	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN 9	31374 GYSRJCT1 60.0 31382 FTCHMTNP 60.0 1	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN 10	31116 GRBRVLE 60.0 31118 KEKAWAKA 60.0 1	Eagle Rock-Cortina 115kV Lines & Cortina- Mendocino No.1 115kV	P7	DCTL	105.27	95.69							No overload with EE. Overloaded without EE.
NCNB-T-SEN 11	31116 GRBRVLE 60.0 31118 KEKAWAKA 60.0 1	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	104.18	96.15							No overload with EE. Overloaded without EE.
NCNB-T-SEN 12	31208 CLOVRDLE 115 31210 MPE TAP 115 1	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	100.29	93.59							No overload with EE. Overloaded without EE.
NCNB-T-SEN 13	31334 CLER LKE 60.0 31338 KONOCIT6 60.0 1	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	108.78	99.00							No overload with EE. Overloaded without EE.
NCNB-T-SEN 14	31336 HPLND JT 60.0 31370 CLVRDLJT 60.0 1	FULTON-FTCHMTNP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN 15	31370 CLVRDLJT 60.0 31374 GYSRJCT1 60.0 1	FULTON-FTCHMTNP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN 16	31374 GYSRJCT1 60.0 31382 FTCHMTNP 60.0 1	FULTON-FTCHMTNP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN 17	31246 BELLVUE 115 31248 PENNGRVE 115 1	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	123.06	111.56							Overloads worsen without EE.



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					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN-18	31248 PENNGRVE 115 31254 CORONA 115 1	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	128.85	116.88							Overloads worsen without EE.
NCNB-T-SEN-19	31254 CORONA 115 31255 LAKEVILLE 115 1	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	122.10	110.96							Overloads worsen without EE.
NCNB-T-SEN-20	32568 IGNACIO 115 32574 SAN RAFL 115 2	Ignacio-San Rafael #1 & Ignacio-Las Gallinas #1 115kV Lines	P7	DCTL	149.02	131.92							Overloads worsen without EE.
NCNB-T-SEN-21	32568 IGNACIO 115 32574 SAN RAFL 115 2	Ignacio-San Rafael #1 & Las Gallinas-San Rafael #3 115kV Lines	P7	DCTL	115.10	102.12							Overloads worsen without EE.
NCNB-T-SEN-22	32568 IGNACIO 115 32570 LS GLLNS 115 3	Ignacio-San Rafael #2 & Ignacio-San Rafael #1 115kV Lines	P7	DCTL	130.47	115.75							Overloads worsen without EE.
NCNB-T-SEN-23	32570 LS GLLNS 115 32574 SAN RAFL 115 3	Ignacio-San Rafael #2 & Ignacio-San Rafael #1 115kV Lines	P7	DCTL	107.71	95.56							Overloads worsen without EE.
NCNB-T-SEN-24	32666 IGNACO B 60.0 32674 WOODACRE 60.0 1	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-25	32669 STAF_JCT 60.0 32673 TOCA_JCT 60.0 1	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-26	32671 BOLINAS 60.0 32674 WOODACRE 60.0 1	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-27	32672 OLEMA 60.0 32671 BOLINAS 60.0 1	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-28	32673 TOCA_JCT 60.0 32672 OLEMA 60.0 1	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-29	32673 TOCA_JCT 60.0 32672 OLEMA 60.0 1	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-30	32656 NAPA 60.0 32662 TULCY JT 60.0 1	TULUCAY-BSLT TAP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-31	31116 GRBRVLE 60.0 31118 KEKAWAKA 60.0 1	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	<100%							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-32	31116 GRBRVLE 60.0 31118 KEKAWAKA 60.0 1	Ukiah-Hopland-Cloverdale 115 kV (Ukiah - Hopland Jct) and Cortina - Mendocino No.1 115 kV (Mendocino - Lucerne Jct1)	P6	Multiple Contingency	113.77	99.96							Overload worsens without EE. Open Breaker at Laytonville.
NCNB-T-SEN-33	31224 INDIN VL 115 31215 LUCERNJ1 115 1	Eagle Rock - Redbud 115 kV Line (Eagle rock - Highland J1) and Ukiah-Hopland-Cloverdale 115 kV (Ukiah - Hopland Jct)	P6	Multiple Contingency	104.02	95.25							No overload with EE. Line overloaded without EE.. Clear Lake 60kV reinforcement project



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					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN-34	31236 FULTON 115 31238 MONROE1 115 1	Corona- Lakeville 115kV Line and Fulton-Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	132.13	120.87							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-35	31236 FULTON 115 31239 MONROE2 115 1	Corona- Lakeville 115kV Line and Fulton-Santa Rosa No.1 115 kV Line (Fulton - Monroe 1)	P6	Multiple Contingency	131.41	120.30							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-36	31238 MONROE1 115 31240 SNTA RSA 115 1	Corona- Lakeville 115kV Line and Fulton-Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	121.29	111.12							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-37	31246 BELLVUE 115 31248 PENNGRVE 115 1	Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroe 1) and Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	123.20	111.67							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-38	31248 PENNGRVE 115 31254 CORONA 115 1	Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroe 1) and Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	128.98	116.98							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-39	31254 CORONA 115 31255 LAKEVILLE 115 1	Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa) and Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	108.93	99.77							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-40	31300 MENDOCNO 60.0 31327 UKIAH JT 60.0 1	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-41	31300 MENDOCNO 60.0 31330 UPPR LKE 60.0 1	Konocti - Eagle Rock 60kV and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	118.08	98.41							No overload with EE. Line overloaded without EE.. Clear Lake 60kV reinforcement project
NCNB-T-SEN-42	31327 UKIAH JT 60.0 31326 PHLO JCT 60.0 1	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-43	31327 UKIAH JT 60.0 31326 PHLO JCT 60.0 1	Mendocino- Ukiah 115 kV(Mendocino - Calpella) and Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP)	P6	Multiple Contingency	112.43	103.20							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-44	31334 CLER LKE 60.0 31335 GRANITE 60.0 1	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Eagle Rock 115/60 KV Bank #1	P6	Multiple Contingency	151.01	129.56							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-45	31334 CLER LKE 60.0 31338 KONOCTI6 60.0 1	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	145.25	122.58							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-46	31334 CLER LKE 60.0 31338 KONOCTI6 60.0 1	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.



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NCNB-T-SEN-47	31335 GRANITE 60.0 31336 HPLND JT 60.0 1	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Eagle Rock 115/60 KV Bank #1	P6	Multiple Contingency	157.28	135.33							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-48	31336 HPLND JT 60.0 31206 HPLND JT 115 2	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-49	31336 HPLND JT 60.0 31206 HPLND JT 115 2	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	148.05	141.50							Overload worsens without EE. Mitigation under review.
NCNB-T-SEN-50	31336 HPLND JT 60.0 31370 CLVRDLJT 60.0 1	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Eagle Rock- Fulton-Silverado 115 kv (Eagle rock - Silverado Jct2	P6	Multiple Contingency	100.64	100.05							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-51	31336 HPLND JT 60.0 31370 CLVRDLJT 60.0 1	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-52	31370 CLVRDLJT 60.0 31374 GYSRJCT1 60.0 1	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-53	31374 GYSRJCT1 60.0 31382 FTCHMTNP 60.0 1	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-54	31378 FULTON 60.0 31382 FTCHMTNP 60.0 1	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-55	32568 IGNACIO 115 32570 LS GLLNS 115 3	Ignacio - San Rafael No. 1 115 kV Line and Ignacio - San Rafael No. 2 115 kV(New)	P6	Multiple Contingency	130.52	115.79							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-56	32568 IGNACIO 115 32570 LS GLLNS 115 3	Ignacio - San Rafael No. 2 115 kV(New) and Ignacio - San Rafael No. 1 115 kV Line	P6	Multiple Contingency	130.52	115.79							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-57	32568 IGNACIO 115 32570 LS GLLNS 115 3	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	100.66	<100%							No overload with EE. Line overloaded without EE.. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-58	32568 IGNACIO 115 32570 LS GLLNS 115 3	Ignacio B 115/60.00 kV BANK No. 1 and Ignacio 230/115 kV Bank #3	P6	Multiple Contingency	100.66	<100%							No overload with EE. Line overloaded without EE.. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-59	32568 IGNACIO 115 32574 SAN RAFL 115 1	Ignacio - San Rafael No. 2 115 kV(New) and Ignacio - San Rafael No. 3 115 kV Line (Las Gallinas - San Rafael)	P6	Multiple Contingency	105.99	94.04							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.



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					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN-60	32568 IGNACIO 115 32574 SAN RAFL 115 1	Ignacio - San Rafael No. 2 115 kV(New) and Ignacio - San Rafael No.3 115 kV Line (Ignacio - Las Gallinas)	P6	Multiple Contingency	137.22	121.46							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-61	32568 IGNACIO 115 32574 SAN RAFL 115 1	Ignacio - San Rafael No. 3 115 kV Line (Las Gallinas - San Rafael) and Ignacio - San Rafael No. 2 115 kV(New)	P6	Multiple Contingency	105.99	94.04							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-62	32568 IGNACIO 115 32574 SAN RAFL 115 1	Ignacio - San Rafael No.3 115 kV Line (Ignacio - Las Gallinas) and Ignacio - San Rafael No. 2 115 kV(New)	P6	Multiple Contingency	137.22	121.46							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-63	32568 IGNACIO 115 32574 SAN RAFL 115 2	Ignacio - San Rafael No. 1 115 kV Line and Ignacio - San Rafael No. 3 115 kV Line (Las Gallinas - San Rafael)	P6	Multiple Contingency	115.14	102.15							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-64	32568 IGNACIO 115 32574 SAN RAFL 115 2	Ignacio - San Rafael No. 1 115 kV Line and Ignacio - San Rafael No.3 115 kV Line (Ignacio - Las Gallinas)	P6	Multiple Contingency	149.09	131.96							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-65	32568 IGNACIO 115 32574 SAN RAFL 115 2	Ignacio - San Rafael No. 3 115 kV Line (Las Gallinas - San Rafael) and Ignacio - San Rafael No. 1 115 kV Line	P6	Multiple Contingency	115.14	102.15							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-66	32568 IGNACIO 115 32574 SAN RAFL 115 2	Ignacio - San Rafael No.3 115 kV Line (Ignacio - Las Gallinas) and Ignacio - San Rafael No. 1 115 kV Line	P6	Multiple Contingency	149.09	131.96							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-67	32570 LS GLLNS 115 32574 SAN RAFL 115 3	Ignacio - San Rafael No. 1 115 kV Line and Ignacio - San Rafael No. 2 115 kV(New)	P6	Multiple Contingency	107.75	95.59							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-68	32570 LS GLLNS 115 32574 SAN RAFL 115 3	Ignacio - San Rafael No. 2 115 kV(New) and Ignacio - San Rafael No. 1 115 kV Line	P6	Multiple Contingency	107.75	95.59							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-69	32574 SAN RAFL 115 32573 Greenbrae 115 1	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	158.50	134.58							Overload worsens without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-70	32574 SAN RAFL 115 32573 Greenbrae 115 1	Ignacio B 115/60.00 kV BANK No. 1 and Ignacio 230/115 kV Bank #3	P6	Multiple Contingency	158.50	134.58							Overload worsens without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-71	32680 GREENBRE 60.0 32682 ALTO 60.0 1	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	117.60	98.58							No overload with EE. Line overloaded without EE.. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-72	32680 GREENBRE 60.0 32682 ALTO 60.0 1	Ignacio B 115/60.00 kV BANK No. 1 and Ignacio 230/115 kV Bank #3	P6	Multiple Contingency	117.60	98.58							No overload with EE. Line overloaded without EE.. Ignacio - Alto Voltage conversion Project will fix it.

Study Area: **PG&E North Coast & North Bay**

Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-VD-SEN-1	BELLVUE 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	11.861	10.743						Voltage deviation worsens without EE
NCNB-VD-SEN-2	MONROE1 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	15.437	14.035						Voltage deviation worsens without EE
NCNB-VD-SEN-3	MONROE2 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	15.501	14.093						Voltage deviation worsens without EE
NCNB-VD-SEN-4	SNTA RSA 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	14.761	13.403						Voltage deviation worsens without EE
NCNB-VD-SEN-5	STONY PT 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	12.901	11.69						Voltage deviation worsens without EE
NCNB-VD-SEN-6	PUEBLO 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31255 LAKEVLL 115.00	P2-4	Bus Tie Breaker	12.132	10.469						Voltage deviation worsens without EE
NCNB-VD-SEN-7	SILVRDJ1 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31255 LAKEVLL 115.00	P2-4	Bus Tie Breaker	8.114	6.97						Voltage deviation worsens without EE
NCNB-VD-SEN-8	SONOMA 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31255 LAKEVLL 115.00	P2-4	Bus Tie Breaker	15.537	13.556						Voltage deviation worsens without EE
NCNB-VD-SEN-9	BIG RIVR 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	12.193	4.584						Voltage deviation worsens without EE
NCNB-VD-SEN-10	COVELO6 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	16.615	10.046						Voltage deviation worsens without EE
NCNB-VD-SEN-11	ELK 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	10.266	4.279						Voltage deviation worsens without EE
NCNB-VD-SEN-12	FRT BRGG 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	14.081	6.228						Voltage deviation worsens without EE
NCNB-VD-SEN-13	GARCIA 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	10.266	4.281						Voltage deviation worsens without EE
NCNB-VD-SEN-14	KEKAWAKA 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	7.888	4.919						Voltage deviation worsens without EE
NCNB-VD-SEN-15	LYTNVLL 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	16.426	9.949						Voltage deviation worsens without EE
NCNB-VD-SEN-16	PHILO 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	7.426	3.505						Voltage deviation worsens without EE
NCNB-VD-SEN-17	PNT ARNA 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	10.263	4.28						Voltage deviation worsens without EE
NCNB-VD-SEN-18	PTTR VLY 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	19.117	11.088						Voltage deviation worsens without EE
NCNB-VD-SEN-19	WILLITS 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	19.3	11.362						Voltage deviation worsens without EE
NCNB-VD-SEN-20	CALPELLA 115 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	7.407	4.848						Voltage deviation worsens without EE
NCNB-VD-SEN-21	FTCH MTN 60 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	65.68	46.528						Voltage deviation worsens without EE
NCNB-VD-SEN-22	GRANITE 60 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	7.151	5.37						Voltage deviation worsens without EE
NCNB-VD-SEN-23	HPLND JT 60 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	11.493	8.163						Voltage deviation worsens without EE
NCNB-VD-SEN-24	HPLND JT 115 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	6.761	4.625						Voltage deviation worsens without EE

Study Area: **PG&E North Coast & North Bay**

Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-VD-SEN-25	MENDOCNO 115 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	7.519	4.896						Voltage deviation worsens without EE
NCNB-VD-SEN-26	UKIAH 115 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	7.221	4.766						Voltage deviation worsens without EE
NCNB-VD-SEN-27	MIDDLTWN 60 kV	Eagle Rock-Cortina 115kV Lines & Cortina-Mendocino No.1 115kV	P7	DCTL	11.925	10.886						Voltage deviation worsens without EE
NCNB-VD-SEN-28	CALPELLA 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	10.546	7.807						Voltage deviation worsens without EE
NCNB-VD-SEN-29	HPLND JT 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	6.783	5.221						Voltage deviation worsens without EE
NCNB-VD-SEN-30	LUCERNE 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	13.084	9.915						Voltage deviation worsens without EE
NCNB-VD-SEN-31	MENDOCNO 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	11.102	8.183						Voltage deviation worsens without EE
NCNB-VD-SEN-32	REDBUD 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	10.997	7.438						Voltage deviation worsens without EE
NCNB-VD-SEN-33	UKIAH 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	9.63	7.184						Voltage deviation worsens without EE
NCNB-VD-SEN-34	MIDDLTWN 60 kV	Eagle Rock-Redbud & Eagle Rock-Cortina 115kV Lines	P7	DCTL	11.823	10.558						Voltage deviation worsens without EE
NCNB-VD-SEN-35	BELLVUE 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	11.808	10.744						Voltage deviation worsens without EE
NCNB-VD-SEN-36	MONROE1 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	15.382	14.035						Voltage deviation worsens without EE
NCNB-VD-SEN-37	MONROE2 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	15.446	14.093						Voltage deviation worsens without EE
NCNB-VD-SEN-38	SNTA RSA 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	14.706	13.404						Voltage deviation worsens without EE
NCNB-VD-SEN-39	STONY PT 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	12.847	11.691						Voltage deviation worsens without EE
NCNB-VD-SEN-40	MIDDLTWN 60 kV	HOMSTKTP-MIDDLTWN #1 115 kV	P2-1	Line Section Open	11.77	10.415						Voltage deviation worsens without EE
NCNB-VD-SEN-41	BOLINAS 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE
NCNB-VD-SEN-42	OLEMA 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE
NCNB-VD-SEN-43	STAFFORD 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE
NCNB-VD-SEN-44	TOCALOMA 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE
NCNB-VD-SEN-45	BOLINAS 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE

Study Area: **PG&E North Coast & North Bay**

Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-VD-SEN-46	OLEMA 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Voltage deviation worsens without EE
NCNB-VD-SEN-47	WOODACRE 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Voltage deviation worsens without EE
NCNB-VD-SEN-48	PUEBLO 115 kV	Lakeville-Sonoma #1 & #2 115kV Lines	P7	DCTL	10.682	9.246							Voltage deviation worsens without EE
NCNB-VD-SEN-49	SONOMA 115 kV	Lakeville-Sonoma #1 & #2 115kV Lines	P7	DCTL	14.036	12.296							Voltage deviation worsens without EE



Study Area: **PG&E North Coast & North Bay**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)							Potential Mitigation Solutions
					2025 SP No AEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-V-SEN-1	COVELO6 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.8123	0.8853						Low voltage worsens without EE
NCNB-V-SEN-2	FRT BRGG 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.875	0.9557						Low voltage worsens without EE
NCNB-V-SEN-3	LYTNVLE 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.8222	0.8936						Low voltage worsens without EE
NCNB-V-SEN-4	PTTR VLY 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.8228	0.9059						Low voltage worsens without EE
NCNB-V-SEN-5	WILLITS 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.8011	0.8847						Low voltage worsens without EE
NCNB-V-SEN-6	FTCH MTN 60 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-7	FTCH MTN 60 kV	FULTON-FTCHMTNP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-8	BELLVUE 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8689	0.8852						Low voltage worsens without EE
NCNB-V-SEN-9	MONROE1 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8404	0.8589						Low voltage worsens without EE
NCNB-V-SEN-10	MONROE2 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8388	0.8575						Low voltage worsens without EE
NCNB-V-SEN-11	SNTA RSA 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8421	0.8606						Low voltage worsens without EE
NCNB-V-SEN-12	STNY PTP 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8586	0.8757						Low voltage worsens without EE
NCNB-V-SEN-13	MIDDLTWN 115 kV	HOMSTKTP-MIDDLTWN #1 115 kV	P2-1	Line Section Open	0.8511	0.8639						Low voltage worsens without EE
NCNB-V-SEN-14	BOLINAS 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-15	OLEMA 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-16	STAFFORD 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-17	TOCALOMA 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-18	WOODACRE 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-19	BOLINAS 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-20	WOODACRE 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE

Study Area: **PG&E North Coast & North Bay**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-V-SEN-21	SONOMA 115 kV	Lakeville-Sonoma #1 & #2 115kV Lines	P7	DCTL	0.8709	0.8934						Low voltage worsens without EE
NCNB-V-SEN-22	CLER LKE 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-23	GRANITE 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-24	HARTLEY 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-25	KONOCTI6 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-26	LOWR LKE 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-27	MIDDLTWN 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-28	MIDDLTWN 115 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-29	UPPR LKE 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-30	CLER LKE 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.8018	0.8456						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-31	EGLE RCK 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.6877	0.7537						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-32	GRANITE 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.8372	0.8753						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-33	HARTLEY 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.8244	0.8619						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-34	KONOCTI6 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.6875	0.7535						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-35	LOWR LKE 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.6396	0.7166						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-36	MIDDLTWN 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.5676	0.6599						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-37	MIDDLTWN 115 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.5247	0.6101						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.

Study Area: PG&E North Coast & North Bay

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-V-SEN-38	UPPR LKE 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.864	0.8933						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-39	BELLVUE 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa)	P6	Multiple Contingency	0.8877	0.8993						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-40	MONROE2 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa)	P6	Multiple Contingency	0.8619	0.8753						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-41	SNTA RSA 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa)	P6	Multiple Contingency	0.8651	0.8783						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-42	STONY PT 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa)	P6	Multiple Contingency	0.8745	0.8867						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-43	BELLVUE 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8682	0.8846						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-44	MONROE1 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8396	0.8583						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-45	MONROE2 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8381	0.8569						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-46	SNTA RSA 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8414	0.8599						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-47	STONY PT 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8534	0.8707						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-48	CLOVRDLE 115 kV	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	0.8047	0.8216						Clear Lake 60kV reinforcement project
NCNB-V-SEN-49	HPLND JT 60 kV	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	0.8565	0.8692						Clear Lake 60kV reinforcement project

Study Area: **PG&E North Coast & North Bay**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-V-SEN-50	HPLND JT 115 kV	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	0.8095	0.826						Clear Lake 60kV reinforcement project
NCNB-V-SEN-51	UKIAH 115 kV	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	0.7896	0.807						Clear Lake 60kV reinforcement project
NCNB-V-SEN-52	BOLINAS 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.8002	0.8587						Ignacio - Alto Voltage conversion project
NCNB-V-SEN-53	HMLTNBFD 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.835	0.8879						Ignacio - Alto Voltage conversion project
NCNB-V-SEN-54	IGNACO A 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.8258	0.8803						Ignacio - Alto Voltage conversion project
NCNB-V-SEN-55	IGNACO B 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.8254	0.8799						Ignacio - Alto Voltage conversion project
NCNB-V-SEN-56	NOVATO 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.825	0.8796						Ignacio - Alto Voltage conversion project
NCNB-V-SEN-57	OLEMA 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.7854	0.8461						Ignacio - Alto Voltage conversion project
NCNB-V-SEN-58	STAFFORD 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.7926	0.8522						Ignacio - Alto Voltage conversion project
NCNB-V-SEN-59	TOCALOMA 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.789	0.8492						Ignacio - Alto Voltage conversion project
NCNB-V-SEN-60	WOODACRE 60 kV	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	0.8094	0.8664						Ignacio - Alto Voltage conversion project